

Title (en)

Catalyst composition comprising shuttling agent for ethylene multi-block copolymer formation

Title (de)

Katalysatorzusammensetzung mit Kettenübertragungsreagenz zur Herstellung von Ethylen-Multiblock-Copolymeren

Title (fr)

Composition catalytique comprenant un agent d'échange réversible pour la formation d'un copolymère à plusieurs blocs d'éthylène

Publication

EP 2221328 A3 20101222 (EN)

Application

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Previously filed application

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Priority

- EP 05730993 A 20050317
- US 55390604 P 20040317

Abstract (en)

[origin: EP2221328A2] The present invention relates to a Multi-block copolymer comprising in polymerized form ethylene and one or more copolymerizable comonomers. In addition, the invention relates to an olefin interpolymers having an MWD from 1.7 to 3.5 and being defined on the basis of DSC and CRYSTAF peaks. Further, the invention encompasses crosslinked derivatives of these polymers and compositions comprising said polymers.

IPC 8 full level

C08F 297/08 (2006.01); **C08F 2/38** (2006.01); **C08F 4/659** (2006.01); **C08F 4/70** (2006.01); **C08F 10/00** (2006.01); **C08L 23/08** (2006.01); **C08F 4/6592** (2006.01); **C08F 110/02** (2006.01); **C08F 210/16** (2006.01)

CPC (source: EP KR US)

C08F 2/38 (2013.01 - KR); **C08F 4/65** (2013.01 - KR); **C08F 10/00** (2013.01 - EP US); **C08F 297/08** (2013.01 - EP); **C08L 23/0815** (2013.01 - EP); **C08L 101/00** (2013.01 - KR); **C08F 4/65908** (2013.01 - EP); **C08F 4/65912** (2013.01 - EP); **C08F 4/65925** (2013.01 - EP); **C08F 4/65927** (2013.01 - EP); **C08F 110/02** (2013.01 - EP); **C08F 210/16** (2013.01 - EP); **C08F 2420/02** (2013.01 - EP); **C08L 23/06** (2013.01 - EP); **C08L 23/0853** (2013.01 - EP); **Y02P 20/52** (2015.11 - EP); **Y10T 428/24942** (2015.01 - EP US); **Y10T 428/24992** (2015.01 - EP US); **Y10T 428/2826** (2015.01 - EP US); **Y10T 428/31573** (2015.04 - EP US); **Y10T 428/31587** (2015.04 - EP US)

C-Set (source: EP)

1. **C08F 10/00 + C08F 2/38**
2. **C08F 10/00 + C08F 4/64144**
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5. **C08L 23/0815 + C08L 2666/06**
6. **C08F 110/02 + C08F 2500/09 + C08F 2500/03**
7. **C08F 210/16 + C08F 210/14 + C08F 2500/08 + C08F 2500/03**
8. **C08F 10/00 + C08F 4/64048**
9. **C08F 10/00 + C08F 4/6411**
10. **C08F 10/00 + C08F 4/64193**
11. **C08F 10/00 + C08F 4/64113**

Citation (search report)

- [A] WO 03022890 A1 20030320 - EXXONMOBIL CHEM PATENTS INC [US], et al
- [X] US 6323284 B1 20011127 - PEACOCK ANDREW J [US]
- [A] US 2003088037 A1 20030508 - STEVENS JAMES C [US], et al
- [XP] WO 2004046214 A2 20040603 - EXXONMOBIL CHEM PATENTS INC [US], et al
- [A] COATES G W ET AL: "CATALYSTS FOR THE LIVING INSERTION POLYMERIZATION OF ALKENES: ACCESS TO NEW POLYOLEFIN ARCHITECTURES USING ZIEGLER-NATTA CHEMISTRY", ANGEWANDTE CHEMIE. INTERNATIONAL EDITION, WILEY VCH VERLAG, WEINHEIM LNKD- DOI:10.1002/1521-3773(20020703)41:13<2236::AID-ANIE2236>3.0.CO;2-3, vol. 41, 1 January 2002 (2002-01-01), pages 2237 - 2257, XP000962053, ISSN: 1433-7851
- [T] BRUASETH I ET AL: "Crystallization analysis fractionation of ethene/1-hexene copolymers made with the MAO-activated dual-site (1,2,4-Me3Cp)2ZrCl2 and (Me5Cp)2ZrCl2 system", POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB LNKD- DOI:10.1016/J.POLYMER.2004.09.038, vol. 45, no. 23, 1 October 2004 (2004-10-01), pages 7853 - 7861, XP004606832, ISSN: 0032-3861
- [AP] SARZOTTI D M ET AL: "Analysis of the chemical composition distribution of ethylene/alpha-olefin copolymers by solution differential scanning calorimetry: an alternative technique to Crystaf", POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB LNKD- DOI:10.1016/J.POLYMER.2004.04.072, vol. 45, no. 14, 1 June 2004 (2004-06-01), pages 4787 - 4799, XP004515407, ISSN: 0032-3861
- [X] GRAEF S M ET AL: "Copolymerization of propylene with higher alpha -olefins in the presence of the syndiospecific catalyst i-Pr(Cp) (9-Flu)ZrCl2/MAO", JOURNAL OF POLYMER SCIENCE. PART A, POLYMER CHEMISTRY, JOHN WILEY & SONS, INC, US LNKD- DOI:10.1002/POLA.10093, vol. 40, no. 1, 1 January 2002 (2002-01-01), pages 128 - 140, XP002355391, ISSN: 0887-624X

Cited by

US11485936B2; US11787880B2; WO2021226423A1; US12037440B2; US11090253B2; US11254847B2; US11332581B2; US11447584B2; US11447586B2; US11542350B2; EP2832431A4; US11299617B2; US11479022B2

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DOCDB simple family (publication)

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RU 2006136414 A 20080427; RU 2375381 C2 20091210; RU 2381240 C2 20100210; SG 151301 A1 20090430; SG 183748 A1 20120927; SG 183749 A1 20120927; TW 200536870 A 20051116; TW 200604224 A 20060201; TW 200604225 A 20060201; TW I391412 B 20130401

DOCDB simple family (application)

EP 09179528 A 20050317; EP 09179946 A 20050317; EP 14176345 A 20050317; ES 05730993 T 20050317; JP 2011252527 A 20111118; JP 2013259896 A 20131217; JP 2015250806 A 20151224; JP 2018147762 A 20180806; JP 2018239462 A 20181221; KR 20067019103 A 20060915; RU 2006136412 A 20050317; RU 2006136414 A 20050317; SG 2009019951 A 20050317; SG 2012061875 A 20050317; SG 2012061883 A 20050317; TW 94108182 A 20050317; TW 94108199 A 20050317; TW 94108201 A 20050317